

AMERICAN FARMER.

RURAL ECONOMY, INTERNAL IMPROVEMENTS, PRICES CURRENT.

"O fortunatos nimium sua si bona norint
Agricolae." . . . VINO.

VOL. I.

BALTIMORE, FRIDAY, August 27, 1819.

NUM. 22.

AGRICULTURE.

Mr. Maddison's Address.

An Address delivered before the Agricultural Society of Albemarle, (Virg.) on Tuesday, May 12, 1819. By Mr. Madison, President of the Society

(Continued from No. 21, page 163.)

Were the earth in every productive spot, and in every spot capable of being made productive, appropriated to the food of man; were the spade substituted for the plough, and all animals consuming the food of man, or food for which human food might be substituted, banished from existence, so as to produce the maximum of population on the earth, there would be more than a hundred individuals, for every one now upon it. In the actual population of many countries, it brings on occasional epidemics to be traced to no other origin than the state of the atmosphere. Increase the numbers to ten or twenty fold, and can it be supposed that they would, at any time, find the breath of life in a condition to support it; or if that supposition be admissible when limited to a single country, can it be admitted, when not only the contiguous countries, but the whole earth was equally crowded?

Must we then adopt the opinion entertained by some philosophers, that no variation whatever in the numbers and proportions of the organized beings belonging to our globe, is permitted by the system of nature; that the number of species and of individuals in the animal and vegetable empires, since they attained a destined complement, has been, and must always be the same; that the only change possible is in local augmentations and diminutions which balance each other, and thus maintain the established and unalterable order of things?

This would be the opposite extreme to that which has been rejected. Man, though so similar in his physical constitution to many other animals, is essentially distinguished from all other organized beings, by the intellectual and moral powers with which he is endowed. He possesses a reason and a will by which he can act on matter organized and unorganized. He can, by the exercise of these peculiar powers, increase his subsistence, by which his numbers may be increased beyond the spontaneous supplies of nature; and it would be a reasonable conclusion, that making as he does, in his capacity of an intelligent and voluntary agent, an integral part of the terrestrial system, the other parts of the system are so framed as not to be altogether unsusceptible of his agency, and unpliant to its effects.

This reasonable conclusion is confirmed by the fact, that the capacity of man, derived from his

reason and his will, has effected an increase of particular plants and animals conducive to an increase of his own race; and a diminution of the numbers, if not of the species, of plants and animals displaced by that increase.

Most, if not all of our domesticated animals probably exceed the numbers which, without the intervention of man, would be their natural amount; whilst the animals preying on or interfering with them, are proportionably reduced in their numbers.

The case is the same with cultivated plants.—They are increased beyond their natural amount; and banish, or proportionally reduce such as interfere with them.

Nor can it be said, that these changes made by human art and industry in some regions, are balanced by corresponding changes made by nature, in other regions. Take for examples, the articles of wheat, rice, millet, and maize, which are the chief food of civilized man; and which are now spread over such immense spaces. It is not possible to regard them as occupying no more than their original and fixed proportions of the earth; and that in other parts of it, they have disappeared in the same degree in which they are thus artificially extended. These grains belong to the torrid and temperate zones only; and so great a proportion of these zones have been explored, that it is certain, they could not have been displaced from other parts of the globe, in the degree in which they abound where they are now cultivated, and where it is certain they owe their abundance to cultivation. There must consequently be an absolute increase of them produced by the agency of man.

Take more particularly for an example, the article of rice, which constitutes so large a portion of human food. The latitudes to which its growth is limited by the nature of the plant, are for the most part so well known, that it may be assumed for an unquestioned fact, that this grain cannot always have prevailed any where, in the extent in which it is now cultivated. And it is equally certain that the vegetable productions belonging to the same climates, which must have been displaced by its cultivation, have not received an equivalent introduction and extension elsewhere.

It is remarkable that the vegetable productions most extensively used as human food, are but little, if at all found in their indigenous state; whether that state be the same as their present one, or a state from which they were improvable into their present state. They seem indeed not likely to flourish extensively in situations not prepared by the hand of man. The potato so recently brought into use, and now spreading itself over so great a surface, can barely be traced to a native state in the mountains of Chili, nor can it be believed, that previous to its adoption by

man, it ever existed in the extent to which cultivation is now carrying it.

These views of the subject seem to authorize the conclusion, that although there is a proportion between the animal and vegetable classes of beings on our globe, and between the species in each class with respect to which, nature does not permit such a change as would result from a destruction of the animals and vegetables not used by man; and a multiplication of the human race, and of the several species of animals and vegetables used by it, sufficient to fill up the void; yet that there is a degree of change which the peculiar faculties of man enable him to make, and by making which, his fund of subsistence and his numbers may be augmented; there being at the same time, whenever his numbers, and the change, exceed the admitted degree, a tendency in that excess to correct itself.

Could it however be supposed that the established system and symmetry of nature, required the number of human beings on the globe to be always the same; that the only change permitted in relation to them, was in their distribution over it; still as the blessing of existence to that number would materially depend on the parts of the globe on which they may be thrown; on the degree in which their situation may be convenient or crowded; and on the nature of their political and social institutions; motives would not be wanting to obtain for our portion of the earth, its fullest share, by improving the resources of human subsistence, according to the fair measure of its capacity. For, in what other portion of equal extent will be found climates more friendly to the health or congenial to the feelings of its inhabitants? In what other, a soil yielding more food with not more labour? And above all, where will be found institutions equally securing the blessings of personal independence, and of social enjoyments? The enviable condition of the people of the United States, is often too much ascribed to the physical advantages of their soil and climate, and to their uncrowded situation. Much is certainly due to these causes—but a just estimate of the happiness of our country, will never overlook what belongs to the fertile activity of a free people, and the benign influence of a responsible government.

In proportion as we relax the hypothesis which makes the aggregate number of mankind unsusceptible of change, and believe that the resources of our country may not only contribute to the greater happiness of a given number, but to the augmentation of the number enjoying a greater happiness, the motives become stronger for the improvement and extension of them.

But whilst all are sensible that agriculture is the basis of population and prosperity, it cannot be denied that the study and practice of its true principles have hitherto been too generally neglected in the United States; and that this state

has at least its full share of the blame. Now only for the first time, notwithstanding several meritorious examples of earlier date, a general attention seems to be awakened to the necessity of a reform. Patriotic societies, the best agents for affecting it are pursuing the object with the animation and intelligence which characterize the efforts of a self-governed people, whatever be the objects to which they may be directed.

Among these promising institutions, I cannot glance at the names of those composing that of Albemarle, without being assured, that its full quota of information will be furnished to the general stock. I regret only, that my own competency bears so little proportion to my wishes to co-operate with them. That I may not be thought, however deficient in good will, as well as in other requisites, I shall venture on the task, a task the least difficult, of pointing out some of the most prevalent errors in our husbandry, and which appear to be among those which may merit the attention of the society, and the instructive examples of its members.

1. The error first to be noticed is that of cultivating land, either naturally poor or impoverished by cultivation. This error, like many others, is the effect of habit, continued after the reason for it has failed. Whilst there was an abundance of fresh and fertile soil, it was the interest of the cultivator to spread his labour over as great a surface as he could. Land being cheap and labour dear and the land co-operating powerfully with the labour, it was profitable to draw as much as possible from the land. Labour is now comparatively cheaper and land dearer. Where labour has risen in price fourfold, land has risen tenfold. It might be profitable, therefore, now to contract the surface over which labour is spread even if the soil retained its freshness and fertility. But this is not the case. Much of the fertile soils is exhausted, and unfertile soils are brought into cultivation; and both co-operating less with labour in producing the crop, it is necessary to consider how far labour can be profitably exerted on them: whether it ought not to be applied towards making them fertile rather than in further impoverishing them; or whether it might not be more profitably applied to mechanical occupations or to domestic manufactures.

In the old countries of Europe, where labour is cheap and land dear, the object is to augment labour and contract the space on which it is employed. In the new settlements taking place in this country, the original practice here may be rationally pursued. In the old settlements, the reason for the practice in Europe is becoming daily less inapplicable, and we ought to yield to the change of circumstances by forbearing to waste our labour on land, which besides not paying for it, is still more impoverished and rendered more difficult to be made rich. The crop which is of least amount gives the blow most mortal to the soil. It has not been a very rare thing to see land under the plough not producing enough to feed the ploughman and his horse; and it is in such cases that the death blow is given.—The goose is killed without even obtaining the coveted egg.

There cannot be a more rational principle in the code of agriculture, than that every farm

which is in good heart should be kept so; that every one not in good heart should be made so; and that what is right as to the farm generally, is so as to every part of every farm. Any system, therefore, or want of system, which tends to make a rich farm poor, or does not tend to make a poor farm rich, cannot be good for the owner, whatever it may be for the tenant or superintendent who has a transient interest only in it. The profit, where there is any, will not balance the loss of intrinsic value sustained by the land.

II. The evil of pressing too hard on the land has also been much increased by the bad mode of ploughing it. Shallow ploughing, and ploughing up and down hilly land have, by exposing the loosened soil to be carried off by rains, hastened more than any thing else, the waste of its fertility. When the mere surface is pulverized, moderate rains on land but little uneven, if ploughed up and down gradually wear it away. And heavy rains on hilly land ploughed in that manner, soon produce a like effect, notwithstanding the improved practice of deeper ploughing. How have the beauty and value of this red ridge of country suffered from this cause? and how much is due to the happy improvement introduced by a member of this Society, whom I need not name,* by a cultivation in horizontal drills, with a plough adapted to it? Had the practice prevailed from the first settlement of the country, the general fertility would have been more than the double of what the red hills, and indeed all other hilly lands now possess; and the scars and sores now defacing them would no where be seen. Happily, experience is proving that this remedy aided by a more rational management in other respects, is adequate to the purpose of healing what has been wounded, as well as of preserving the health of what has escaped the calamity. It is truly gratifying to observe how fast the improvement is spreading from the parent example. The value of our red hills, under a mode of cultivation which guards their fertility against wasting rains, is probably exceeded by that of no uplands whatever; and without that advantage, they are exceeded in value by almost all others. They are little more than a lease for years.

Besides the inestimable advantage from horizontal ploughing, in protecting the soil against the wasting effect of rains, there is a greater one, in its preventing the rains themselves from being lost to the crop. The Indian Corn is the crop which most exposes the soil to be carried off by the rains, and it is at the same time the crop which most needs them. Where the land is not only hilly, but the soil thirsty, (as is the case particularly throughout this mountainous range) the preservation of the rain as it falls, between the drilled ridges, is of peculiar importance; and its gradual settling downwards to the roots, is the best possible mode of supplying them with moisture. In the old method of ploughing shallow with the furrows up and down, the rain, as well as the soil was lost.

III. The neglect of manures is another error which claims particular notice. It may be traced to the same cause with our excessive cropping. In the early stages of our agriculture, it was more convenient and more profitable

to bring new land into cultivation, than to improve exhausted land. The failure of new land, has long called for the improvement of old land; but habit has kept us deaf to the call.

Nothing is more certain than that continual cropping without manure deprives the soil of its fertility. It is equally certain, that fertility may be preserved or restored, by giving to the earth animal or vegetable manure equivalent to the matter taken from it; and that a perpetual fertility is not, in itself, incompatible, with an uninterrupted succession of crops. The Chinese, it is said, smile at the idea that land needs rest, as if like animals, it had a sense of fatigue. Their soil does not need rest, because an industrious use is made of every fertilizing particle, that can contribute towards replacing what has been drawn from it. And this is the more practicable with them, as almost the whole of what is grown on the farms is consumed within them. That a restoration to the earth of all that annually grows on it, prevents its impoverishment, is sufficiently seen in our forests; where the annual exuvæ of the trees and plants, replace the fertility of which they deprive the earth. Where frequent fires destroy the leaves and whatever else is annually dropped on the earth, it is well known that the land becomes poorer; this destruction of the natural crop having the same impoverishing effect as the removal of a cultivated crop. A still stronger proof that an annual restoration to the earth of all its annual product will perpetuate its productiveness, is seen where our fields are left uncultivated and unpastured. In this case, the soil, receiving from the decay of the spontaneous weeds and grasses, more fertility than they extract from it, for a time at least, improved, not impoverished. Its improvement may be explained, by the fertilizing matter which the weeds and grasses derive from water and the atmosphere, which forms a neat gain to the earth. At what point, or from what cause, the formation and accumulation of vegetable mould from this gain ceases, is not perhaps very easy to be explained. That it does cease, is proved by the stationary condition of the surface of the earth in old forests; and that the amount of the accumulation varies with the nature of the subjacent earth, is equally certain. It seems to depend also on the species of trees and plants which happen to contribute the materials for the vegetable mould.

But the most eligible mode of preserving the richness, and of enriching the poverty of a farm is, certainly that of applying to the soil a sufficiency of animal and vegetable matter in a putrified state, or a state ready for putrefaction, in order to procure which, too much care cannot be observed in saving every material furnished by the farm. This resource was among the earliest discoveries of men living by agriculture: and a proper use of it has been made a test of good husbandry in all countries, ancient and modern, where its principles and profits have been studied.

Some farmers of distinction, headed by Tull, supposed that mere earth, in a pulverized state, was sufficient without manure for the growth of plants; and consequently, that continued pulverization would render the soil perpetually productive; a theory, which never would have occurred

* Col. T. M. Randolph.

to a planter of tobacco or of Indian corn, who finds the soil annually producing less and less, under a constant pulverizing course. The known experiment of Van-Helmont seemed to favour the opposite theory, that the earth parted with nothing towards the plants growing on it. If there were no illusion in the case, the earth used by him must, at least, have been destitute of vegetable mould. For, in an experiment by Woodhouse, a garden mould was diminished in its weight by a plant which grew in it. And the latest chemical examinations of the subject coincide with the general opinion of practical husbandmen that the substance of plants, partakes of the substance of the soil.

The idea, is indeed, very natural that vegetable matter which springs from the earth, and of itself returns to the earth, should be one source at least of the earth's capacity to re-produce vegetable matter.

It has been asked how it happens that Egypt and Sicily, which have for ages been exporting their agricultural produce without a return of any equivalent produce, have not lost their reproductive capacity. One answer has been, that they have lost no small degree of it. If the fact be otherwise with regard to Egypt, it might be accounted for by the fertilizing inundations of the Nile. With regard to Sicily, there may be something in the system of husbandry, or some particular local circumstances, which counter-vail the continued exportation of the fruits of the soil. But it is far more probable, that the island is less productive than it once was. It is certainly less of a granary for other countries now, than it was when it received that title from the ancient Romans. And its population being diminished, the internal consumption must also be diminished. If a single farm is rendered less productive by a continued removal of its crops, without any adequate returns, no reason occurs why it should not happen to a number of farms multiplied to the extent of a whole country.

And that individual farms do lose their fertility in proportion as crops are taken from them, and returns of manure neglected, is a fact not likely to be questioned.

If it were, Virginia, unfortunately, is but too capable of furnishing the proofs. Her prevailing crops have been very exhausting, the use of manures has been particularly neglected.

Tobacco and Indian Corn, which for a long time on the east side of the Blue Mountains were the articles almost exclusively cultivated, and which continue to be cultivated, the former extensively, the latter universally, are known to be great impoverishers of the soil. Wheat, which has for a number of years, formed a large portion of the general crop, is also an exhausting crop. So are rye and oats which enter occasionally into our farming system.

With so many consumers of the fertility of the earth, and so little attention to the means of repairing their ravages, no one can be surprised at the impoverished face of the country; whilst every one ought to be desirous of aiding in the work of reformation.

The first and main step towards it, is, to make the thieves restore as much as possible of the stolen fertility. On this, with other improvements which may be made in our husbandry, we

must depend for the rescue of our farms from their present degraded condition.

Of Tobacco, not a great deal more than one half of the entire plant is carried to market. The residue is an item on the list of manures: and it is known to be in its quality a very rich one. The crop of tobacco, however, though of great value, covers but a small proportion of our cultivated ground, and its offal can of course contribute but inconsiderably to the general stock of manure. It is probable also that what it does contribute, has been more carefully used as a manure, than any other article furnished by our crops.

The article which constitutes our principal manure is wheat straw. It is of much importance therefore to decide aright on the mode of using it. There are three modes:—1. Carrying it from the farm yard, after having passed through or being trodden and enriched by cattle. In that mode, the greater part of it must be used, if used at all: the straw going through that process, being a necessary part of the food allotted to the cattle. To derive the full advantage from it, it ought to be hauled out before the substance has been wasted by rain, by the sun, and by wind; and to be buried in the earth as soon after as possible. 2. Spreading the straw on the surface of the ground. Many respectable farmers are attached to this mode, as protecting the soil from the sun: and by keeping it moist, favouring the vegetation underneath, whether spontaneous or artificial; whilst the straw itself is gradually decomposed into a manure. The objection to this mode is the loss by evaporation, before this last effect is obtained. 3. Turning the straw at once under the surface of the earth. This would seem to be the best mode of managing manures generally; least of their substance being then lost. When the grain is trodden out from the straw, it is left in a state easily admitting this operation. Some difficulty may attend it, when the grain is threshed from the straw by the flail or by the machines now in use, neither of which break the straw sufficiently to pieces.

It may be remarked with regard to this article of manure—1. That its weight is barely more than that of the grain. 2. That the grain is the part which makes the greatest draft on the fertility of the earth. 3. That the grain is for the most part not consumed within the farm. It is found on trial that a stalk of wheat, as generally cut, including the chaff, and the grains borne by the stalk, are pretty nearly of equal weight. The case is probably the same with rye; and not very different with oats. The proportion of fertilizing matter in the straw, to that in the grain, has not, as far as I know, been brought to any satisfactory test. It is doubtless much less in the straw, which alone in the case of wheat, is with us returnable in any form to the earth. This consideration, whilst it urges us to make the most of the article as a manure, warns us of its insufficiency.

The stubble and the roots of the small grains, not being taken from the earth, may be regarded as relapsing into a fertility equal to that of which they deprived the earth. This remark is applicable to all cultivated plants, the roots of which are not an esculent part.

An eminent citizen and celebrated agricultu-

rist* of this state, has among other instructive lessons, called the public attention to the value of the cornstock as a manure. I am persuaded that he has not overrated it—And it is a subject of agreeable reflection, that an article which is so extensively cultivated as that of Indian corn, and which is so particularly exhausting, should be the one so capable of repairing the injury it does.

The corn stock as a fodder is of great value. Not only the leaves, but the husk enclosing the ear, and the cob enclosed by it, are all more or less valuable food when duly preserved and dealt out to cattle. There is no better fodder than the leaves or blades for horses and oxen; nor any so much approved for sheep. The husk or shuck is a highly nourishing food for neat cattle. And the pickings of the stalk, even at a late season, and after much exposure to the weather, support them better than any of the straws. From the saccharine matter in the stalk, which is long retained about the joints, it cannot be doubted that if cut early, or before exposure to the weather, into parts small enough for mastification, it would well repay, as a food for cattle, the labour required for it.

The great value of the corn stalk, in all its parts as a fodder, was brought into full proof, by the use made of it during the late general failure of crops. It is to be hoped that the lesson will not be suffered to pass into oblivion.

[To be continued.]

* Col. John Taylor.

FROM THE ALBANY ARGUS.

Treatise on Agriculture.

SECTION IV.

Of the Analysis of soils, and of the agricultural relations between soils and plants.

[Continued from No. 21, page 167.]

We have seen that the earths have a threefold capacity, that they receive and lodge the roots of plants and support their stems; that they absorb and hold air, water and mucilage—aliments necessary to vegetable life; and that they even yield a portion of themselves to these aliments. But we have also seen, that they are not equally adapted to these offices; that their parts, texture and qualities are different; that they are cold or warm, wet or dry, porous or compact, barren or productive, in proportion as one or other may predominate in the soil; and that to fit them for discharging the various functions to which they are destined, each must contribute its share, and all be minutely divided and intimately mixed. In this great work nature has performed her part, but as is usual with her, she has wisely and benevolently left something for man to do.

This necessary march of human industry, obviously begins by ascertaining the nature of the soil. But neither the touch, nor the eye, however practised or acute, can in all cases determine this. Clay, when wet, is cold and tenacious—a description that belongs also to magnesian earths: sand and gravel are hard and granular; but so also are some of the modifications of lime: vegetable mould is black and friable, but not exclusively so: for schistous and carbonaceous earths have the same properties.

It is here then, that chemistry offers herself to obviate difficulties, and remove doubts; but neither the apparatus nor process of this science, are within the reach of all who are interested in the inquiry, and we accordingly subjoin a method, less comprehensive, but more simple, and sufficiently exact, for

a, ricultural purposes; and which calls only for two vases a pair of scales, clean water and a little sulphuric acid.

"1st. Take a small quantity of earth from different parts of the field, the soil of which you wish to ascertain, mix them well together and weigh them; put them in an oven, heated for baking bread, and after they are dried, weigh them again, the difference, will show the absorbent power of the earth. When the loss of weight in 400 grains, amounts to 50, this power is great, and indicates the presence of much animal or vegetable matter; but when it does not exceed twenty, the absorbent power is small, and the vegetable matter deficient (1.)

2d. Put the dried mass into a vase with one fourth of its own weight of clear water; mix them well together; pour off the dirty water into a second vase and pour on as much clean water as before; stir the contents and continue this process until the water poured off, is as clear as that poured on the earth. What remains in the first employed vase is sand, silicious or calcareous.

3d. The dirty water, collected in the second vase, will form a deposit, which (after pouring off the water) must be dried, weighed and calcined. On weighing it after this process, the quantity lost, will show the portion of animal and vegetable mould contained in the soil; and,

4th. This calcined matter must then be carefully pulverised and weighed, as also the first deposit of sand but without mixing them. To these apply, separately, sulphuric acid, and what they respectively lose in weight, is the portion of calcareous or aluminous earths contained in them. These last may be separated from the mass by soap lie, which dissolves them." (2)

Here is the light we wanted. In knowing the disease, we find the cure. Clay and sand qualify each other; either of these will correct an excess of lime, and magnesian earth, when saturated with carbonic acid, becomes fertile.

But entirely to alter the constitution of a soil, whether by mechanical or other means, is a work of time, labour and expense, and little adapted to the pecuniary circumstances of farmers in general. Fortunately a remedy, cheaper, more accessible and less difficult, is found in that great diversity of habits and character, which mark the vegetable races. We shall therefore, in what remains of this section, indicate the principle of these, as furnishing the basis of all rational agriculture.

1st. Plants have different systems of roots, stems and leaves and adapt themselves according to different kinds of soils: the tussilago prefers clay, the spargula sand, asparagus will not flourish on a bed of granite nor muscus islandicus on one of alluvion. It is obvious, that fibrous rooted plants, which occupy only the surface of the earth, can subsist on comparatively stiff and compact soils in which these of the leguminous and cruciform families would perish from inability to penetrate and divide.

2d. Plants of the same or of a similar kind, do not follow each other advantageously in the same soil. Every careful observer must have seen how grasses alternate in meadows or pastures, where nature is left to herself. At one time timothy, at another clover, at a third red-top, and at a fourth blue grass prevails. The same remark applies to forest trees; the original growth of wood, is rarely succeeded by a second of the same kind; pine is followed by oak, oak by chesnut, chesnut by hickory. A young apple tree will not live in the place, where an old one has died; even the pear tree does not thrive in succession to an apple tree, but stone fruit will follow either with advantage. "In the Gauntinise, (says Bosc,) saffron is not resumed but after a lapse of twenty years; and in the Netherlands, flax and kolzat require an in-

(1) See Davy's elements.

(2.) This method of analysing soils, is that described by Mr. Bosc, a member of the institute of France, &c. and recommended to French Agriculturists.

terval of six years. Peas when they follow beans, give a lighter crop than when they succeed plants of another family." (3.)

3d. Vegetables whether of the same family or not, having a similar structure of roots, should not succeed each other. It has been observed, that trees suffer considerable by the neighbourhood of sainfoin and lucern, on account of the great depth to which the roots of these plants penetrate—whereas culmiferous grasses do them no harm.

4th. Annual or biennial trefils, prevent the escape of moisture by evaporation, or filtration from sandy and arid soils, and should constantly cover them in the absence of other plants; [4] while *drying and dividing crops*, as beans, cabbages, chickory, &c. &c. are best fitted to correct the faults of stiff and wet clays.

5th. When plants are cultivated in rows or hills, and the ground between them is thoroughly worked, the earth is kept open, divided and permeable to air, heat and water, and accordingly receives from the atmosphere, nearly as much alimentary provision as it gives to the plant. This principle is the basis of the drill husbandry.

6th. All plants permitted to go through the phases of vegetation (and of course to give their seeds) exhaust the ground in a greater or less degree; but if cut green, and before seeding, they take little from the principle of fertility.

7th. Plants are exhausters in proportion to the length of time they occupy the soil. Those of the culmiferous kinds (wheat rye, &c.) do not ripen under ten months, and during this period, forbid the earth from being stirred; while on the other hand leguminous plants occupy it but six months, and permit frequent ploughings. This is one reason why culmiferous crops are greater exhausters than leguminous; another is, that the stems of culmiferous plants become hard and flinty, and their leaves dry and yellow from the time of flowering till the ripening of the seed—losing their inhaling or absorbing faculties—circulating no juices and living altogether by their roots, and on aliments exclusively derived from the earth—whereas leguminous or cruciform plants, as cabbages, turnips, &c. &c. have succulent stems, and broad and porous leaves and draw their principal nourishment from the atmosphere. The remains of culmiferous crops also are fewer, and less easily decomposed, than those of the leguminous family.

8th. Meadows, natural and artificial, yield the food necessary to cattle, and in proportion as these are multiplied, manures are increased and the soil made better. Another circumstance that recommends them is that so long as they last, they exact but little labour, and leave the whole force of the farmer to be directed to his arable grounds. [5]

9th. Grasses are either fibrous or tap-rooted, or both: The remarks already made in articles 1, 2, &c., apply also to them. Timothy, red-top, oat grass, and rye grass, succeeded best in stiff, wet soils. Sainfoin does well on soils the most bare, mountainous and arid; lucern and the trefils, (or clovers,) only attain the perfection of which they are susceptible, in warm, dry, calcareous earth.

10. The ameliorating quality of the tap-rooted plants is supposed to be in proportion to their natural

(3) The ill effect of a succession of crops of the same kind was not unknown to the Romans. We have proof of this in the following passage of Festus: "Restibilis ager fit qui continuo bienio sarritur farreo spico, id est aristato, quod, ne fiat solent qui pradiatocant, exasperare."

(4) The "Sterilis tellus medio versatur in aestu" of Virgil, shows the opinion he entertained of a husbandry that left the fields without vegetation.

[5] The good effect of these mixtures was known to the ancients, from whom the practice has descended to us. What a picture of fertility and abundance have we in the 22d chap. 18th book of Pliny's Natural History; "Subvite seritu frumentum, mox legumen, decinde olus, omnia, eodem anno, omniaque alieni umbra aluntur."

duration annual clover, [lupinella,] has less of this property than biennial [Dutch clover] less than sainfoin, and sainfoin less than lucern.

11. Any green crops ploughed into the soil, has an effect highly improving; but for this purpose, lupins and buck-wheat [when cut in flower] are most proper.

12. Mixed crops [as Indian corn, pumpkins, and peas, and oats] are much and profitably employed, and with less injury to the soil than either corn or oats alone.

For the American Farmer.

On Hedging. No. 3.

How far the foregoing remarks on the value of a living fence compared with that of a dead one, may preponderate in the minds of others, I must leave them to determine. But the consideration of that subject for upwards of thirty years past, has had so much weight with me as to produce a resolution to attempt to raise one, at least on a small scale. Although there were discouraging objections presented, and which probably have deterred others; such as the unpleasant appearance of those hedges which had been neglected ever after being planted and which obtained their growth as nature directed, becoming so high as to obstruct a view over the farm in any direction; so that the traveller on the public road, hedged on both sides, is insulated and excluded from all the pleasure of seeing the beauties of a well cultivated neighbourhood as he passes through. Those neglected hedges not only obstruct the view, but occupy a considerable portion of ground that might be better employed, if their spreading side branches were removed as they should be, for they afford shelter to briars and a variety of other things pestiferous to a farm occasioned by the droppings from birds, perching on these very convenient resting places as they pass on; the berries and seeds of which, in their turn, invite a visit from the aerial passenger, and keep up a continued product of those things so pernicious to the farmer.

The wide spreading branches of a neglected hedge produce all those base, discouraging effects, and lead people to believe that there is no better way of managing the live fence than to suffer such bad consequences to attend their labours.

On viewing all those inconveniences and disadvantages, I should have declined the propagation of thorn wholly, if I had not believed that they could be cultivated and formed into a neat and durable hedge free from such difficulties; and I have since found it not only practicable, but an easy task, compared with the labour of fencing in any other manner.

All the ground necessary for a good hedge, is from two to three feet in width; the plough and the scythe should occupy the residue; and from five to six feet in height, is all sufficient to check the most ungovernable animal on a farm.

Another practice prevails with many that have planted hedges, when these are grown to a considerable height, they cut them down, turning the tops into the road if on a road side or otherwise on the defensive side to form a fence, while the young shoots from the stump forms another hedge in the place of the former. If the top is cut off wholly, it soon decays, but not until abundance of pernicious productions have taken root and risen through the brush wood that lays on the ground.

A third practice is to cut partially off leaving as much of the stock went as to retain life, and then turn them down as before, with all the bad consequences as above and the addition of a perpetuation of them. The brush wood continues living, and a new hedge rising at the same time from the stumps, the rubbish that takes root and grows up through this mass of protection, and affords shelter for pernicious animals, as well as vegetable productions, such as briars, thistles, mulleins, elders, wild grass, and poison vines, as well as many others—occupying a considerable space, forming a hedge row of unconquerable pests and keeping up a continuation of seed, to be carried by the birds over a whole neighbourhood.

A fourth practice is pursued as a more improved plan, it is called plashing: cutting as before, partially and laying the stock longitudinally, at the same time turning the top end of the cutting to the defensive side and driving stakes upright through the plashing to keep them in their places: being laid down horizontally on upon another, they form a defence; and also a living hedge—the shoots rising from the roots soon aspire to their original height, and drawing the flow of sap, the parts laid down naturally decline in strength yet live, are very tenacious of life in every posture while there is any communication with the root—which circumstance induced me to attempt to train in another way. I readily saw that the operations of the mode justly decided, must be repeated further by cutting away and laying or plashing again and again in perpetuity, making it a serious job. And after all, in self-defence not only the rugged thorn, but every other product associated with, and twined amongst it, must be cut away.

It is not strange that hedging has not progressed, under a belief that there was no better mode of practice than what generally appeared.

Occasional Extracts of Letters.

TO THE EDITOR,

dated—*Talbot County, 13th July, 1819.*

I saw LLOYD'S Chile Wheat, when it was almost fit to cut; it has a very fine large head and stock, but I fear it has too much sap, making it more subject to rust, or mildew; but this may be owing to its being sowed thin. I find amongst the *Lawler Wheat*, scattering heads all over of a very dark colour, and remarkably large head and fine grain. I have never seen any of this kind before; it has, I think, certainly imbibed the properties of the *Lawler Wheat*, in its capacity to resist the fly, if so, it is vastly superior to the *Lawler*, the grain is quite as good, and much larger, and in colour resembling the red chaff bearded wheat. I have picked out about one and a half gallons of it, and shall be particular in ascertaining further its character and qualities.—My *Ruta Baga* looks well—I can see it over the whole ground—one fourth of an acre, sowed exactly according to COBBETT'S directions.

RYE.

TO THE EDITOR,

dated—*Washington County, [Md.] Aug. 10, 1819.*

Having been indebted to your useful paper, for many valuable suggestions, allow me to contribute a mite towards the improvement of Maryland Agriculture.

A rotation of crops, it is generally admitted, is absolutely necessary in order to perfect our system. As to the most proper rotation, farmers will disagree indeed, what will suit one soil, or one farmer, will not suit another, but rye is a crop which may be introduced on any farm and at any stage. It will succeed in fallow, in corn ground, or in stubble. For the last fourteen or fifteen years, I have never missed a good crop of Rye—and the best crop I ever made was in wheat stubble, ploughed once and harrowed in—and I have every reason to think, that Rye may be sown with success in the same field for many years in succession.

The great and the only secret in regard to ensuring a good crop of rye, is *early* sowing. From the middle of August to the middle of September, I have always found to be the best time for sowing rye. From three pecks to a bushel per

acre, is amply sufficient for seed. Early sown rye is much more heavy than the latter; and further, it affords excellent pasture both in the fall and springs, nor does pasturing injure the crop; in many cases it is a real benefit, particularly when eaten down by sheep. Clover also succeeds much better after rye than after wheat.*

By raising rye, a farmer can do with a less quantity of Indian corn. Rye meal mixed with cut straw is a strong and healthy food for work horses. Fifty acres planted in corn, and sown down in rye, will thus be equal to one hundred acres in corn alone. If the corn ground is rich, it may be sown in wheat, then stubbled and sown in rye.

Rye will be found on rich or on poor land, a good crop. It is not liable to the ravages of the Hessian fly, nor is it injured by smut and some other diseases to which wheat is subject. Where land will produce ten bushels of wheat to the acre, it will yield fifteen of rye. Rye is a strong and healthy food for man and beast, and from rye is produced that reviving and invigorating cordial called *Columbia*, which ought to supersede the use of foreign spirituous liquors.†

PORCIUS.

* The Editor is of opinion, that clover succeeds better with rye than with any other grain he has ever seen it sown with.

† We should rejoice to see whiskey itself superseded by good cider and cheap malt liquors. We consider the cheapness of whiskey and other ardent liquors as a fruitful source of national misery and degradation. We shall, at some leisure moment, make a more formal attack upon this "*cordial*, called *Columbia*:" in the meantime, we are much obliged to our correspondent for his communication, and think we ought, and hope we shall have the benefit of his aid in promoting the good cause in which we are engaged.

Guinea Grass, &c.

TO THE EDITOR.

Dated—*August 17th, 1818.*

DEAR SIR: I received from a gentleman, who got it from Jamaica, about a tea spoon full of *Guinea Grass Seed*. I sowed of this about one third in a very favourable place to forward vegetation, about the 10th of April. I could not discover any of it to come up. The first week in May, I sowed another third in a hot bed, and none came up. The last of May the remainder was sowed in a drill, and came up in about 12 or 15 days, and is now growing finely, but is a very coarse grass. Indeed I am told the seed will not ripen here, as the frost kills it entirely. I began this letter in the hope of being able to send you some seed, but my messenger has returned and says, that the person from whom I got my seed, sowed all he had, and none came up: he sowed a peck.

We very often see little or nothing in gardens, from the crops not succeeding each other in the most economical manner. I send you the following from *Middleton's View of the Agriculture of Middlesex, England*.

Observations on Gardens, between Westminster and Chelsea.

Soon after Christmas, when the weather is

open, the gardeners begin by sowing the borders and then the quarters with raddishes, spinage, onions, and all the other seed crops. As soon afterwards as the season will permit, which is generally in February, the same ground is planted with cauliflowers from the frames as thick as if no other crop had possession of the ground: the raddishes, &c. are soon sent to market, and when the cauliflowers are so far advanced as to be earthed up, sugar loafed cabbages are planted from the aforesaid seed crops. When these are marketed, the stalks are taken up, the ground cleared and planted with endive and cellery from the aforementioned seed crops, and daily as these are marketed, the cellery is cropped for winter use. The gardeners agree in one maxim, to dung plentifully, dig the soil well and to sow good seed.

The following is the estimate:

Raddishes,	£10
Cauliflowers,	60 to 70
Cabbages,	30
Cellery, 1st crop,	50 to 60
Endive,	30
Cellery,	40
Total amount, per acre, under	£220

This estimate is stated as under the mark. Some seasons occasion a considerable deduction; but they do not often occur; £200 per acre is a very low estimate.

Expenses are:

Labour,	4.35	Rent, taxes & tithes, 12	
Teams and dung,	25	Marketing,	8
Total amount of expense,	1.80		

The farming gardeners, as those who plough, are situated at a distance from London, and occupy larger tracts of land, and follow this order of cropping:

January and February, early peas, gathered and sold green. In June, the haulm, when dry stacked for horses. The cleared ground is sowed with turnips, which are sold in autumn; the ground then ploughed and planted with collards.

There are about 8000 acres cultivated in this manner, producing £50 per acre.

Gardens, at heat houses, 200 acres at £200, is	£40,000
Surry side of the Thames, 500 acres, at £150, is	75,000
Round the outskirts of London, 1300, at £100, is	130,000
Wholly cultivated by the spade, 2000, at £120, is	245,000
Farming gardeners, 8000, at £50, is	400,000

Total of acres, 10,000	645,000
To which add fruit gardens	400,000

£1,045,000

Gardeners provide for their families on few acres of the best ground; as well as the generality of farmers on 150 or 200 acres. There are some gardeners in the Commission of the Peace; the profession has produced several Sheriffs of counties, and more who have realized from 20 to 50,000*l*. Mr. Risberry, of Little Sutton, has upwards of eighty acres cropped with asparagus, which cost about 1000*l*. per acre, making; the labour afterwards, 50 shillings per acre, except cutting and marketing; it is very profitable in sandy land; in kindly growing sea-

sons cutting twice in 24 hours. Profit, 50%. per acre, with very little expense.

I will send by the stage some of the Guinea grass.

With respect, yours, &c.

NOTE. The receipt of the grass, in excellent order, is thankfully acknowledged. It was immediately transplanted and seems to be doing well, at the Editor's dwelling, where any one having the curiosity, may call and see it. The ingenious manner in which it was put up, and sent in good condition, by stage upwards of 40 miles, in a state, apparently as fresh as when pulled up, deserves notice, and may prove useful in like cases. Two bunches of grass were pulled up with all the dirt adhering to the roots; they were laid between two shingles, the roots of both branches placed together at one end; and the stalks and blades (about 18 inches long) placed smoothly between the two shingles which meet at the other end; thus completely protecting the whole; an old paper is then wrapped over and tied about the whole. A small tree, shrub, or grass of any kind, might, as we suppose, in this way, be safely sent to any distance, by land or water; or more especially, if the earth about the roots were occasionally moistened. Small matters and contrivances of this sort, which seem of little import, are often worthy of notice, as the means of readily accomplishing desirable objects, otherwise not attainable.

COMPENDIOUS DICTIONARY OF

THE VETERINARY ART:

CONTAINING
A CONCISE EXPLANATION

Of the various Terms used in Veterinary Medicine and Surgery: Also, a short Description of the Anatomy or Structure of the Eye, the Foot, and other important parts of the Horse; with practical observations on his Diseases, as well as those of other domestic animals.

From a new English work, bearing the above title, we shall occasionally extract such articles, as shall appear most interesting, taking them in alphabetical order, and commencing, now, with the word

ABORTION. Miscarriage, slipping or slinking the foal or calf. Mares, when far gone with foal, if overworked or improperly ridden, are liable to miscarriage: it is caused also by the accidents which sometimes happen at grass; such as falling into a ditch or pit, and struggling to extricate themselves; or being kicked in the belly. In cows, slipping calf is sometimes caused by the smell of blood, carrion, or any putrid animal matter, and the slinking of one cow is apt, from this circumstance, to be communicated to others. As soon therefore as any symptoms of approaching abortion are observed, it is proper to separate the cow from the rest of the herd. The first appearances are generally a sudden filling of the udder, a loose and flabby appearance of the genital parts, which discharge a little red

coloured fluid: the animal appears to be indifferent in grazing, and sometimes shows signs of uneasiness or pain. Cows in good condition are most liable to abortion; and it is well known, that milk fever or inflammation of the womb, often a fatal disease in cows, seldom attacks such as are rather lean than fat at the time of calving. It has been observed, that cows more frequently slip their calves at the latter end of the year, than at other times. A cow that has once slipped calf, becomes more liable to the accident in future; and as often as the accident happens, so does the liability to it increase: it is of importance therefore, when a cow has slipped, to remove carefully the cleansings or afterbirth, and never to suffer blood, carrion, or any kind of dead animal matter to be taken into the pasture where pregnant cows are kept. Various means have been recommended for preventing abortion; that is, when those appearances which indicate its approach are observed. Bleeding, I believe, is the best, if not the only preventive; more especially when it is caused by bruises or over exertion, or in violent struggling, or being driven about and hurried. And in such cases, not less than from four to six quarts of blood should be taken off, according to the strength of the animal. When the symptoms of approaching abortion appear to arise from other causes; when cows appear stupid, chewing the cud languidly or not at all, an opening drench should also be given. Take half a pound of sulphate of magnesia (Epsom salt) three or four drams of aloes in powder, and about three pints of warm gruel; one dose. After abortion has taken place, the cow should be kept in a sheltered place by herself; if the afterbirth has not passed off, that is, if she has not cleansed, as it is commonly termed, no force or medicine should be used to hasten its removal. The various drenches that are employed for this purpose, as well as those to prevent abortion, are always useless, sometimes injurious. The same treatment is applicable to mares that have slipped foal.

ABSCISS. A swelling generally produced by a bruise, or other external injury, sometimes, however, it arises from other causes, as in strangles. The swelling is at first hard and painful to the touch, but gradually becomes softer from the upper part towards the bottom. When the whole of the tumour feels soft and elastic, that is yielding to the pressure of the finger, but immediately rising again when the finger is removed, it is said to be ripe, and may be opened with a lancet, or other convenient instrument; a whitish coloured matter will then flow from it, nearly as thick as cream; this is termed *pus*. When the extent of the cavity has been ascertained, by means of a probe or the finger, the whole is to be laid completely open. By this method all the pus will freely escape, and merely by washing it twice a day with warm water, it will soon get well, without further trouble; but if, according to the common mode of treatment, only a small opening is made, the matter then pressed out by squeezing with the fingers, in which operation the neighbouring parts are often bruised and inflamed, and the cavity filled with tow dipped in some digestive ointment, the cure is protracted, and often either a fresh abscess forms, or the matter from being confined, spreads into other

parts, so as to form what are termed sinuses or pipes. To hasten the process of suppuration, or the formation of matter, poultices are the best applications; but they should be renewed at least twice a day. When poultices cannot be conveniently used, fomentation should be substituted for them. An abscess should not be opened too early, or before the whole of the tumour has become soft; when this does not happen as soon as is expected, the bottom of the tumour remaining hard while the upper part feels soft, it is better to continue the poultice until the whole has become soft, or the upper part opens naturally; this natural opening is to be enlarged, should it be found necessary; and the poultice continued in order to soften or induce suppuration in the remaining hard swelling. When sinuses or pipes are discovered, they are to be laid completely open, and washed with a solution of blue vitriol or other detergent fluid. Abscesses sometimes form internally, as in the lungs, liver, &c. (See *Poultice, Fomentation, Tumours, Strangles, Vives, Fistula, Poll-evil, and Ulcers*.) Abscesses are sometimes said to be critical, or a consequence of fever or some other general indisposition; in which case they have been thought to be beneficial.

ABSORBENTS. Chalk, prepared oyster shells, bole, and other earths, that readily absorb fluids, are thus denominated. Preparations of this kind are sometimes given with a view to absorb or correct any hurtful matter that may be supposed to exist in the stomach. In cases of depraved appetite, for example, where horses eat their litter in preference to good hay, and are often seen licking the walls, and eating any earthy matter that comes in their way, such medicines are recommended. It is more probable, however, that this disposition depends upon a diseased state of the stomach, and that mild purgatives are the best remedies.

(To be continued.)

THE FARMER.

BALTIMORE, FRIDAY, AUGUST 27, 1819.

THE EMIGRANT.

FOR THE AMERICAN FARMER.

MR. EDITOR,

In one of the daily papers, some observations recently appeared, benevolently designed to excite our sympathy towards the distressed and disappointed emigrants who have taken refuge on our shores from that despotism from which they have endeavoured to escape in Europe.

Of that despotism, however legitimate it may appear on that side the Atlantic, few who are natives of this country have any correct ideas. Even those who have long since escaped from its oppressions and are now, or recently have been, in the full tide of prosperity, seem, in some degree, callous to the difficulties of the unhappy emigrant.

A Hibernian by birth myself, I would address myself chiefly, to the feelings of those, who have ever known or experienced any of those oppressive ills which have forced his fellow emi-

grants from the land of his native and parental attachment.

It is true, we have here a Hibernian Society. But from whatever cause it proceeds, though certainly composed of men who wish to cherish benevolent principles towards those whom they have pledged themselves to aid and encourage; yet I say to whatever cause it may be owing, the writer of this, confesses himself to be ignorant of any thing manifested by that, or indeed by any other Hibernian Society, consistent with the benevolence and hospitality, for which they take a pride in the character of their forefathers. Tell me ye sons of Hibernian characteristic benevolence, how many of either your doors, or your purses, are open to distressed Irish emigrants? Though many of you are blessed with profusion, and ready to run headlong into all sorts of extravagance, how little, extremely little, have most of you contributed to the relief of the distresses of the emigrant! As often as the tales of that distress reach my ear, how do I blush for the little efforts of our scanty benevolence! *Here and there*, a casual, trifling boon is bestowed; but where, ah, where can we find any well founded active system, adequate to relieve and to comfort, on any liberal or effectual scale, the many claimants that present themselves, especially in the summer?

It is not so much from National attachment, as from that duty which is religiously enjoined upon all who call themselves Christians, that it would become us to cherish benevolence towards the emigrant stranger. What a sublimely pathetic appeal to our hearts is made by the Divine author of that religion we profess! "*I was a stranger and ye took me not in!*" Let the heart that feels not all the moral bearing and obligation of these sacred words, go to its kindred—and renounce the name of MAN.

Alas! when my eye meets, which of late is not seldom, the friendless emigrant—a parent—with an infant in the hand—or on the bosom—that may yet fight the battles of this, my country—wandering houseless on our roads, or in our streets—looking in at every door—but no door open for hospitable reception—with a countenance rueful with reflection on all the ills, and heart rending attachments it has left—and now like the dove of the Patriarch, finding in this, year even in this wide and happy country, no sheltered spot whereon to rest the weary head or feet—is it possible to restrain the tear of sympathy? Shall this forlorn situation of the friendless stranger excite no regard? Am I a man, and shall I not be prompted to cheer and relieve my fellow men? Am I a Christian, and shall I dare to risk the doom denounced by my Saviour against those who "*take not the stranger in.*"

How lovely is that benevolence, which without hope of reward, or fear of penalty, has even the semblance of being entirely disinterested? But where—ah, where shall we look for its angelic face? If therefore, in these sad days of imperfection, our benevolence must be either founded on, or blended with sordid interest, do Mr. Editor, submit the following plan for the relief of emigrants to your many enlightened readers, especially to such of them, who, as wealthy and extensive farmers and land holders, might lend their benevolent aid and influence,—let such

have erected on their lands, a few decent log cabins, as an asylum for such friendless and destitute emigrant families, as they could accommodate. Let such of these as are able and willing to work, be employed and receive moderate wages for a time, in consideration of the accommodations with which they have been furnished. Let the term of their occupancy of these asylums, be at their option, but not exceeding a certain period agreed upon. And when employed, the wages and encouragement given to them, be in proportion to their merit and diligence.

They would thus be enabled immediately on their arrival, to resort at least to the shelter of a house—and if entirely destitute, have some prospect of sustenance for their family. They would also be enabled to acquire a knowledge of our modes of labour and agricultural improvement—and would be saved from the corruption of the dissipated, who are in wait, either to rob them of any little they possess, or to seduce them to share in their own idle and profligate habits.

I presume there can be little doubt, that were proper pains taken to inform emigrant families, that such asylums were ready to receive them, they would be induced to resort to them immediately on their arrival—and it would then become the duty of the Hibernian Society, to see that the advantages to the proprietor who had prepared these asylums, and to those accommodated, should be justly reciprocal.

Indeed I have often thought it strange, that the Hibernian Benevolent Society, long ere this time, had not, on some proper plan, possessed themselves of a few hundred acres of land, and have put up, for this purpose, a few cabins for destitute emigrant families, or individuals, to be sheltered and employed until they could better dispose of themselves.—Such a property might be rendered mutually beneficial. The land would be cultivated by the emigrants—its value, in time, greatly enhanced—and its annual produce might by economical management not only sustain such hands as would be permanently employed on the place; but the surplus, when stored, and carefully preserved, might supply such emigrants as might be accommodated on the ensuing summer.

Such an asylum is certainly neither impracticable, nor is it discouraging with respect to expense. By proper management it might be brought to support itself. And should the society at a future period be disposed to sell the land, when thus highly improved by culture, with the proceeds they might do more than purchase a new asylum, or establishment to be improved in like manner.

Thus, in a progressive ratio, they might enlarge the bounds and increase the value of the property. Other benevolent Societies, the St. George's, St. Andrew's, St. Dennis's, &c. might follow their example, and a laudable rivalry be raised and supported among all the benevolent patrons of the honest and industrious emigrant. Each farm might thus be rendered an agricultural school for exhibiting their respective national improvements in farming—and some premiums might be conferred on those who manifested most merit or diligence, or who

introduced any agricultural improvements into the country of their adoption.

BENEVOLUS.

August 14th 1819.

Escape from the Penitentiary.

Nine prisoners made their escape from the Penitentiary in this city, on Sunday night last, under circumstances leaving little doubt that they were aided by some person or persons at liberty. On Monday, says the Gazette, the several officers of the Penitentiary were examined before Judge Brice, respecting the circumstance of their escape. It appeared that the locks of the doors of three of the rooms in which the criminals lodge at night, had been unlocked; the locks being on the outside of the room doors, in a passage in which the guard was accustomed to walk: that the only person on guard when they escaped was Richard Chapman, who stated, that the criminals after getting out of their lodging rooms, knocked him down and passing him, escaped at the front door; that he fired a pistol after they passed to alarm the keeper and officers. The explanation of Chapman being unsatisfactory, and the circumstances being such as to induce strong suspicions of his having aided in or connived at the escape, he was committed for trial.

Four Captains and a Lieutenant of the navy, have been suspended from command, by Commodore Stewart, of the Mediterranean squadron. It seems, if report be correct, that the Commodore saw fit to *reprimand* them in consequence of disapproving of a sentence of a court martial of which they were members and a reply from them caused their suspension. The gallant *McDonough* is said to be one of the officers suspended.—

The frequent disagreements which have taken place between our naval officers, since the war, is a subject of mortification and of deep national regret.—We are aware, that where high and honourable feeling is to be maintained, that frequent collisions may arise, where tempers are not properly chastened, and differences of opinion, impetuously defended, too frequently lead to results, deplorable in a national point of view, unhappy as it regards the families of the individuals, and derogatory to those immediately concerned. We could wish, in common with our country, most sincerely and ardently, that these unfortunate occurrences were less frequent; that the discipline might be maintained without assumption; and inferiority confessed where no degradation is implied. And we wish also, that where differences do arise, they might be always amicably adjusted unless they should unfortunately rest upon more substantial ground than has been assigned for several regretted incidents which have recently occurred.

The extensive printing establishment of Mess. Bensley & Son, in London, was lately consumed by fire. Loss estimated at £. 130,000.

Liverpool Markets, July 5, 1819.

Our Cotton market has exhibited this week more life than we have experienced for a long

time past; but principally in American descriptions, in which considerable business has been done on speculation, in consequence of which disposition, holders have, within the last two days, obtained an advance of 1-2d per lb. on Bowed and New Orleans, and other descriptions have fully supported former rates, though the demand has been comparatively limited.

Tobacco still exhibits a tendency to decline; particularly qualities suitable for export. Kentucky leaf has depreciated 3-4 a 1d per lb. a parcel having been sold at 3 1-4d with some ordinary sound Virginia, at 3 2d per lb; good ordinary to middling however, support the previous quotations. The trade have bought sparingly.

American Stocks—U. S. Bank, 1.20 5s has been offered and refused: U. S. Six per cents, 98 a 100: Spanish Dollars 5s 1-2d per ounce.

Imports of Foreign Corn—The ports are now closed against the importation of Foreign Barley, Oats and Peas from all ports between the Byder and Bidassoa: for all these recited articles the ports will continue open for the importation from all other countries, till the 21st of August next.

Extract of a letter from an American Gentleman at Fayal, dated 13th July.

"The Russian frigate Kamschatka, that has been nearly three years on a voyage of discovery, stopped here on her return home, and remained three weeks—The commander, Golownin, is celebrated from the circumstance of his captivity several years in Japan, and his account of that country, now passing the rounds of the periodical publications. He, with the principal officers and scientific gentlemen of his suite, were entertained by Mr. Dabney, the United States' Consul at the celebration of Independence, at his house, and all expressed the highest respect for our country and republican institutions. The dinner was succeeded by a ball, attended by 120 ladies and gentlemen, highly gratifying to the Russian guests.

The landscape painter did the consul the favour to sketch that part of the town and harbour where the attack on the Brig General Armstrong took place, which he has forwarded to Capt. Reid, who so gallantly defended that vessel.

It is understood that the want of such a drawing had retarded the execution of an engraving representing that extraordinary action.

From the Archives of Useful Knowledge,

TO CONVEY FISH.

A crumb of bread is to be soaked in brandy, and when swelled the fish's mouth is filled therewith, into which a half glass more of the spirit is then to be poured. The fish remains motionless, and as if deprived of life, in which state it is to be wrapped in fresh straw, and afterwards in cloth. In this condition they may be kept, or conveyed to any distance for 8 or 10 days.—When arrived at the place of destination, they must be unpacked, and thrown into a cistern of water, where they remain a quarter of an hour, or sometimes an hour without showing any signs of life; but at the end of that time they disgorge

very abundantly, and recover their life and ordinary motions.

Catfish may be conveyed in a cart for many miles, by being surrounded with fresh grass, provided spring water is frequently dashed over them. The journey ought to be commenced a little before day, so that the fish may be put into a pond destined for them, before the heat of the day.

Dr. Mitchell of New York, relates, that in 1790, he in company with another gentleman, transported yellow perch 40 miles, viz. from Rockonkoma pond, in Suffolk county, to Success pond, in North Hempstead, Long Island. Three dozen of those who had been most superficially wounded by the hook were taken, and all except two swam away when put into the pond. A large churn was filled with the water of their native pond, and so few fishes put in that there was no necessity of changing it on the road, and afterwards driving steadily on a walk the whole distance, without stopping to refresh either man or horse. In two years these fishes multiplied so fast, and became so numerous, that they might be caught with the hook in any part of the water, which was about a mile in circumference.

Pittsburg, Penn. Aug. 13.—The depredations now committing by the Grasshoppers, in some parts of the country, are truly singular and alarming. Many farmers have commenced cutting their oats completely green, and many meadows are shaved perfectly smooth—An instance has occurred, of a hat accidentally left in a meadow, being entirely destroyed.

DIED.

At Cambridge, his residence, on Tuesday morning 3d inst. LEVIN H. CAMPBELL, Esq. of a sudden and violent bilious disease, which in the short period of two days, from the highest health and spirits, bereaved a wife of a most kind and affectionate husband, and infant family of the most tender and doating father, two helpless sisters of their only friend and protector, society of a member whose loss will be deplored while virtue is regarded: a loss which has inflicted on at least one bosom friend, a wound never, never to be healed.

In the meridian of life—in the zenith of a character constituted by the most amiable as well as brilliant qualities that adorn the soul of man—vanished this mortal ornament of human nature.

Possessed of a strong and vigorous mind, highly cultivated by diligent application, and an ardent thirst for knowledge, he attained an unusual proficiency in the various departments of science, which rendered him highly useful to the society in which he resided from his youth.

Kind, benevolent, hospitable and generous, he was beloved by all who knew him.

Charitable to excess, and beyond the prudent allowance of his limited finances, the indigent widow and the helpless orphan will long deplore the irreparable loss of their dear friend.

Possessed of a lively mind, a social disposition, and versatile talents, men of every class and condition were made happy in his company;—his correct principles, and deportment, his pure and

sympathising heart, riveted and secured forever the affections he had won.

That he was sincere and immutable in his friendship, the mournful author of this faint picture can bear witness, from the enjoyment of his unlimited confidence, and of a mutual and disinterested friendship: love and they lived in harmony from their early youth, at college a period of twenty-five years, and thence to the sad moment when the fell messenger of death summoned him to his God, in the fullness of his virtues, to appear at the bar of infinite justice, and be recorded in the book of *life eternal*.

Cambridge, Aug. 5, 1819.

Present Prices of Country Produce

Ascertained by actual sales, within the last week.

WHITE WHEAT—Sales on Monday last, at \$1 13 a 1 15—Yesterday, 1 18 to 1 22½ best quality. Red Wheat—Sales on Monday \$1 10. Yesterday at \$1 13. Corn 50 a 60 cts.—Oats 45 a 50 cts.—Rye 50 a 55 cts.—Tobacco six hhds. from Calvert County, sold by J spicknall, at 8 and \$10—one do. at \$11—two hhds. wagon Tobacco, 10 and 13 dollars.

GENERAL BOYD.

The British House of Commons passed a resolution on the 28th June, to allow Gen. Boyd, a native of the United States, lately of the army, 6000 pounds sterling, in consideration of his services in the British army in India, at an early period of life, when the affairs of that nation, in that quarter, were in a very critical state. Mr. Wilberforce, who brought forward the resolution, stated, that it was very desirable to show the inhabitants of the United States, by the proceedings of the British house of Commons, that they do not consider them with any unfriendly feeling, or entertain towards them any prejudices incompatible with the full performance of justice.—*N. Y. E. Post.*

Circulation of the London Observer.—The Editor of this Journal, which is issued only once a week, has published a detailed statement of the sale of his publication, during the year ending on the 2d of May last. By this statement, it appears, that the smallest number of papers issued on one day was 10,400; the largest number 13,925, and the total number in the year, 602,224. We presume there is no other weekly paper, published in any other part of the world, which has so great a circulation. The Editor closes his detailed statement with the following remark: "It may not be wholly uninteresting for the reader to know, that the amount paid to the revenue for 602,224 impressions, independent of the excise upon twelve hundred and four reams of paper, at three pence each pound weight, and the duty of three shillings and sixpence upon every advertisement, made a total sum contributed to the revenue by the Observer Journal, in one year, of about ten thousand pounds, and that for only fifty-two publications."

PRINTED EVERY FRIDAY,
FOR

JOHN S. SKINNER.